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09/821,565

03/29/2001

Mark M. Ishikawa

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10/20/2004

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EXAMINER

TRAN, TONGOC

ART UNIT

PAPER NUMBER

2134

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,565

Applicant(s)

ISHIKAWA, MARK M.

Examiner

Tongoc Tran

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/22/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to Preliminary Applicant's application no. 09/821,565 filed on 3/29/2001. Claims 16-39 are added. Claims 1-39 are pending.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the informal drawing are not in sufficient quality. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Objections

4. Claim 1 is objected to because of the following informalities:

The phrase "with each together" appears to be a typographical error.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-13 and 16-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Shanklin et al. (U.S. Patent No. 6,578,147, hereinafter Shanklin).

In respect to claim 1, Shanklin discloses a detection system for identifying and eliminating excessive requests for information on a network to prevent the failure of a portion of the network, comprising (see col. 4, lines 25-41):

at least one switching device, wherein the switching device has predefined parameters for the receipt of an acceptable volume of requests for information (see Abstract, col. 1, line 63-col. 2, line 13);

at least one server, wherein the switching device and server are in electronic communication with each other; and wherein the switching device is configured to

receive requests for information and attempts to respond to the request (see Fig. 1, col. 3, lines 10-18); and

an activity monitoring system, the activity monitoring system comprising a route arbiter and a traffic analyzer, wherein the activity monitoring system is in electronic communication with the switching device (see Fig. 2, col. 5, lines 14-55).

In respect to claim 2, Shanklin discloses a detection system as claimed in claim 1, further comprising a firewall, wherein the firewall is configured to receive requests for information (see col. 1, lines 19-16).

In respect to claim 3, Shanklin discloses a detection system as claimed in claim 1, wherein the route arbiter monitors the requests received by the router (see Fig. 1, col. 3, lines 10-18).

In respect to claim 4, Shanklin discloses a detection system as claimed in claim 2, wherein the route arbiter is coupled to the firewall and the switching device, and wherein the route arbiter monitors the requests received by the firewall and the switching device (see Fig. 2, col. 1, lines 19-16, col. 3, lines 10-18 and col. 5, lines 14-55).

In respect to claim 5, Shanklin discloses a detection system as claimed in claim 1, wherein the route arbiter is configured to compare the volume of requests to the predefined parameters for the receipt of an acceptable volume of requests (see Fig. 2, col. 1, line 63-col. 2, line 13 and col. 5, lines 14-20).

In respect to claim 6, Shanklin discloses a detection system as claimed in claim 1, wherein the route arbiter is configured to instruct the switching device to direct

requests for information to the traffic analyzer (see Fig. 3-4, col. 5, line 55-col. 6, line 4 and col. 7, lines 20-28).

In respect to claim 7, Shanklin discloses a detection system as claimed in claim 1, further comprising a null address router, wherein the null address router is coupled to the traffic analyzer (see col. 4, lines 54-61).

In respect to claims 8, 11, 16, 17, 19, 21, 25-26 and 31, the claim limitations are similar to claims 1 and 4. Therefore, claims 8, 11, 16-17, 25-26 and 31 are rejected based on the similar rationale.

In respect to claim 9, Shanklin discloses a method as claimed in claim 8, wherein responding to the forwarding of packets of information further comprises instructing the first network to cease advertising the network address to the second network device (see col. 1, lines 19-26).

In respect to claim 10, Shanklin discloses a method as claimed in claim 8, wherein responding to the forwarding of packets of information further comprises forwarding the packets of information from the analyzer to a null address router (see col. 4, lines 54-61).

In respect to claim 12, the claim limitation is similar to claim 9. Therefore, claim 12 is rejected based on the similar rationale.

In respect to claim 18, Shanklin discloses the detection system of claim 16, further comprising a firewall coupled to the switching device (see col. 1, lines 19-26).

In respect to claim 20, the claim limitation is similar to claim 10. Therefore, claim 20 is rejected based on the similar rationale.

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In respect to claim 22, Shanklin discloses the method of claim 21, wherein the predefined condition is associated with abnormal network activity (see col. 4, lines 31-41).

In respect to claim 23, Shanklin discloses the method of claim 22, wherein the abnormal network activity is the occurrence of a nondecreasing volume of traffic at a predefined threshold level for a predefined period of time (see col. 4, lines 31-41).

In respect to claim 24, Shanklin discloses the method of claim 21, wherein the predefined condition is associated with abnormal traffic patterns (see col. 4, lines 31-41).

In respect to claim 27, Shanklin discloses the activity monitoring system of claim 26, wherein the route arbiter is coupled to the network via a switching device (see col. 5, lines 14-20).

In respect to claim 28, Shanklin discloses the activity monitoring system of claim 27, wherein the switching device is a router (see Abstract).

In respect to claim 29, Shanklin discloses the activity monitoring system of claim 26, wherein the predefined acceptance criteria indicate whether the influx of network activity is changing in volume (see col. 4, lines 31-41).

In respect to claim 30, Shanklin discloses the activity monitoring system of claim 26, wherein the predefined acceptance criteria indicate that the network activity is not decreasing in volume, and wherein the predefined response criteria is a threshold network activity level (see col. 4, lines 31-41 and col. 6, lines 25-55).

In respect to claim 32, Shanklin discloses the method of claim 31, wherein the predefined redirection criteria cause the problematic traffic to be blocked (see col. 4, lines 54-61).

In respect to claim 33, Shanklin discloses the method of claim 31, wherein the predefined redirection criteria cause the problematic traffic to be redirected to a device that does not respond to the problematic traffic (see col. 4, lines 54-61).

In respect to claims 34-35, the claim limitations are similar to claim 33. Therefore, claims 34-35 are rejected based on the similar rationale.

In respect to claim 36, Shanklin discloses the activity monitoring system of claim 26, wherein the route arbiter is coupled to a peering point located upstream from a plurality of edge devices (see col. 5, lines 20-55).

In respect to claim 37, Shanklin discloses the detection system of claim 1, wherein the activity monitoring system is incorporated into the switching device (see col. 5, line 55-col. 6, line 65).

In respect to claim 38, Shanklin discloses the detection system of claim 1, wherein the route arbiter is incorporated into the switching device and the traffic analyzer is maintained in a separate device (see col. 5, line 55-col. 6, line 65).

In respect to claim 39, Shanklin discloses the detection system of claim 1, wherein the traffic analyzer is incorporated into the switching device and the route arbiter is maintained in a separate device (see col. 5, line 55-col. 6, line 65).

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6. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Putzolu et al. (U.S. Patent No. 6,578,147, hereinafter Putzolu).

In respect to claim 14, Putzolu discloses a method for determining the best connection or path for a router to transmit traffic to a specific destination on a network, wherein a path on a network includes a plurality of independent segments that are coupled together via links, and wherein the volume of users on the network defines the network load, comprising:

analyzing the amount of network load; and analyzing link availability to determine the specific links to traverse, wherein the analysis of link availability comprises: analyzing traffic load on the specific link pathway, wherein the traffic load is the volume of users on the specific link; and analyzing the availability of the network (see col. 3, line 31-col. 5, line 15).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Putzolu (U.S. Patent No. 6,578,147) in view of Beigi et al. (U.S. Patent No. 6,363,056, hereinafter Beigi).

In respect to claim 15, Putzolu discloses a method as claimed in claim 14. Putzolu does not explicitly disclose but Beigi discloses transmitting a sample packet from a starting point and measuring the amount of time for the Packet to return to the starting point (see Beigi, Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of analyzing traffic load on a specific pathway taught by Putzolu with the teaching of determining the round trip time by using probe packets in order to estimate the expected amount of time of network traffic to be received (Beigi, Abstract).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Schuba et al. Disclose network protection for denial of service attacks.

- Torres discloses systems and methods for analyzing network traffic.

- Sharon et al. Disclose automatic network traffic analysis.

Tams et al. Disclose methods and apparatus for collecting, storing, processing and using network traffic data.

- Lewis discloses network traffic controller.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tongoc Tran whose telephone number (571) 272-3842.

The examiner can normally be reached on 8:30-5:00 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached at (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Tongoc Tran
Art Unit: 2134

TT



October 15, 2004



GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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